Shamak Dutta

✉ s7dutta@uwaterloo.ca
http://shamak.github.io

Education

2019–now **PhD in Electrical and Computer Engineering**, *University of Waterloo*, Canada.
Advisor: Stephen L. Smith

2017–2019 **Masters in Systems Design Engineering**, *University of Waterloo*, Canada.
Advisors: Bryan Tripp & Graham Taylor
University of Waterloo Graduate Scholarship (2019)
Thesis: Correlated Noise in Deep Convolutional Neural Networks

2012–2017 **Bachelors in Computer Engineering**, *University of Waterloo*, Canada.
Engineering International Student Scholarship (2013)
President's Scholarship of Distinction (2013)
President's Research Award (2015)

Publications

2018 **Convolutional Neural Networks Regularized by Correlated Noise**.
S. Dutta, B. Tripp, G. Taylor
15th Canadian Conference on Computer and Robot Vision (CRV), 2018.

2016 **Barcodes for Medical Image Retrieval Using Autoencoded Radon Transform**.
H. Tizhoosh, C. Mitcheltree, S. Zhu, and **S. Dutta**
23rd International Conference on Pattern Recognition (ICPR), 2016.

Research Experience

Summer 2018 **Research Intern**, *Preferred Networks*, Tokyo, Japan.
Advisors: Shunta Saito & Masaki Saito
Video prediction/generation using deep learning.

Summer 2017 **Research Intern**, *Latent Logic (now Waymo)*, Oxford, United Kingdom.
Advisors: Joao Messias & Shimon Whiteson
3D pose estimation from 2D video using machine learning.

Fall 2016 **Research Intern**, *Amazon Search*, Palo Alto, USA.
Advisors: Bing Yin & Erick Cantu-Paz
Search ranking for long-tailed search queries on Amazon.com using machine learning.

Summer 2016 **Undergraduate Student**, *Adaptive Systems Lab*, University of Waterloo, Canada.
Advisor: Dana Kulic
Regression methods for human motion data.

Summer 2016 **Undergraduate Student**, University of Waterloo, Canada.
Advisor: Stephen L. Smith
Heuristics for the Generalized Traveling Salesman Problem.

Fall 2015 **Undergraduate Student**, *KIMIA Lab*, University of Waterloo, Canada.
Advisor: Hamid Tizhoosh
Image compression and retrieval using deep learning.

Teaching Experience

Winter 2021 **Teaching Assistant**, Algorithms & Data Structures (ECE 250).

Summer 2020 **Teaching Assistant**, Reinforcement Learning (ECE 493).

Winter 2020 **Teaching Assistant**, Algorithm Design & Analysis (ECE 406).

Courses

UW (Graduate): Estimation & Hypothesis Testing (L. Zeng), Introduction to Optimization (J. Geelen), Convex Analysis & Optimization (H. Wolkowicz), Stochastic Processes (W. Zhuang), Optimal Control (N. Azad), Stochastic Control (S. Smith), Computational Neuroscience (B. Tripp).

UW (Bachelors): Machine Learning (P. Poupart), Pattern Recognition (A. Wong), Quantum Mechanics (M. Reimer), Probability Theory (R. Mazumder), Robotics & Control (D. Kulic), Adaptive Algorithms (O. Basir), Computer Networks (S. Naik), Analog Communications (W. Zhuang), Analog Control (S. Smith), Compilers (V. Ganesh), Discrete Math (M. Pei).